REMARKS/ARGUMENTS:

The Office Action of March 11, 2004 has been carefully reviewed.

As noted by the Examiner, Eastvold teaches a series of distributed test units ("DTU") 12 communicating by a standard serial protocol RS-232. In this protocol, a data link layer 116 adds a check sum to the data when transmitted (and conversely when received checks this check sum), and a session layer 118 adds for transmission (or checks for receipt), a cyclic redundancy code (CRC).

The data link layer 116 of Eastvold thus arguably provides formatting to reduce undetected transmission loop errors per the first network independent protocol device of claim 1 and step (b) of claim 11 of the present invention, and the session layer 118 of Eastvold provides formatting broadly analogous to the second standard network protocol device of claim 1 and step (c) of claim 11.

Such check sums and CRCs of standard protocols are inadvertently within the scope of the claims of the present invention. Accordingly, the Applicant has amended claims 1 and 11 to indicate both a specific type of formatting (specifically CRCs and/or sequence codes) and the fact that whatever formatting is selected, the first network independent protocol device provides a redundant CRC and/or sequence code to that provided by the second standard network protocol device.

The Applicant notes in this regard that two successive applications, say of a CRC code, would not normally be suggested to one of the prior art in the context of a standard protocol such as RS232 because anything which could be accomplished with two successive CRC codes could normally (absent the considerations of the present invention) be accomplished more efficiently with a single CRC code of increased length. The additional time of two such separate CRC operations would normally also recommend against such separate operations.

The present invention provides a technique for providing enhanced advanced safety operation on standard low reliability networks. In this circumstance, an ability to change the length of the CRC code is not available because such a changed message would no longer be compatible with the standard protocol.

This redundant encoding of data of the present invention is not suggested by the Eastvold reference which is not concerned with the low reliability provided by a standard RS232 protocol. The Eastvold reference is further distinguishable from the present invention in that it describes only a standard network protocol device (RS232) and not a network independent device as is introduced in the present invention.

In light of these amendments and remarks, it is believed that claims 1, 2, 4-11, and 13-19 are now in condition for allowance and allowance is respectfully requested.

Respectfully submitted,

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By

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